U.S. Environmental Protection Agency,
Region 7
Water, Wetlands and Pesticides Division
Drinking Water Management Branch
and
Water Enforcement Branch

Kansas Public Water Supply Supervision Program ~~Department of Health and Environment~~ ~~Drinking Water~~ Program Evaluation ~~Full Performance Evaluation~~

Draft Report
November XXX, 2011

Site Visit
September 19-23, 2011

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Introduction

An announcement of the Annual~~Full~~ Performance Evaluation (APE) was mailed to the Kansas Department of Health and Environment (KDHE) on August 23, 2011. As outlined in that letter, the ~~full~~ evaluation of the Kansas drinking water program was conducted during the week of September 19, 2011, at the Curtis State Office Building in Topeka, Kansas.

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~~———~~Doug Brune with the Drinking Water Management Branch and Scott Marquess with the Water Enforcement Branch conducted the evaluation for the U.S. Environmental Protection Agency (EPA). John Montgomery, Senior Environmental Employee, with the Drinking Water Management Branch assisted with the evaluation of drinking water compliance monitoring data. Darrel Plummer, Dan Clair, Patty Croy…WHO?? from KDHE participated or assisted EPA in conducting the evaluation.

Thie Public Water System Supervision (PWSS) evaluation evaluated the programmatic, enforcement, and data management, ~~capacity development, and operator certification~~ aspects of the PWSS. Although the capacity development and operator certification program are not primacy requirements under the PWSS program, they were also evaluated during this site visit. During the evaluation, XX files, provided in electronic format, were reviewed in combination with information provided by KDHE staff, in addition to information found in the Safe Drinking Water Information System (SDWIS) and the Kansas Drinking Water Watch.

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EPA's enforcement review focused on KDHE's implementation of EPA's Enforcement Response Policy (ERP), and on the monitoring of existing enforcement orders. The ERP specifies Return to Compliance (RTC) or formal enforcement for all systems where the Enforcement Targeting Tool (ETT) identifies a priority. ETT priorities are intended to represent the worst health-based violators. There were 43 PWSs identified as "enforcement priorities" included on the ETT list (July 2011 ETT list) at the time of the review. The enforcement review included conversations with KDHE staff, review of SDWIS/FED data, review of data in Kansas Drinking Water Watch, and an examination of (electronic) system files.

~~Karl Mueldener, Director, Bureau of Water, and Dave Waldo, Chief, Public Water Supply Section, announced their retirement from KDHE on September 12, 2011. Their last day at the KDHE Offices was September 19, 2011. John Mitchell, KDHE's Director of Environment, announced on September 19, 2011, that Mike Tate, Chief, Technical Services Section, would be the Interim Director of the Bureau of Water, effective on September 20, 2011. No announcement had been made regarding an Interim Chief for the Public Water Supply Section.~~

~~Kelly Kelsey, Enforcement and Regulation Development Supervisor, left KDHE in February 2011. No announcement had been made filling the position.~~

~~Dave Waldo was present at the entrance interview, as well as Darrel Plummer, Chief, Compliance and Data Management Unit, and Dan Clair, Chief, Engineering and Permits Unit. Numerous staff from KDHE participated in or assisted EPA in conducting the full evaluation.~~

The exit conference was held at 1:00 p.m. on September 29, 2011, by telephone. Mike Tate, Darrel Plummer, ~~and D~~Dan Clair, ~~as well as~~ Vickie Wessel, and Teresa Schuyler~~, from KDHE's~~ participated in the exit conference for KDHE. ~~Water and Wastewater Operator Certification Program, managed by the Technical Services Section, were present in the Cottonwood Room at the Curtis State Office Building in Topeka, while Doug Brune,~~ Mary Mindrup, Diane Huffman, Doug Brune, and Scott Marquess~~, and Diane Huffman~~ participated from the EPA ~~Room 4230 at the~~ Region 7 Offices.

Summary of Findings

The text needs to list the findings that support a need for some "corrective actions". We don't clearly present, in all cases, why corrective actions are needed.

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1) The date for the extension of submitting request for approval of primacy revision to adopt 4 rules (Stage 2 DBP, LT2, Ground Water Rule, and Short Term Revision to Lead and Copper Rule) was in October 2011. The corrective action letter needs to propose a date for submitting the request for approval of primacy revision to adopt these four rules. needs to be proposed by the end of this calendar year.

2) The corrective action letter needs to announce an Interim or Enforcement and Regulation Development Supervisor.

3) Twenty four systems consistently exceeded a maximum contaminant level on a quarterly basis in 2010. The corrective action letter needs to include steps for returning these systems to compliance as soon as possible.

Arsenic: Argonia, Atwood, Buhler, Clayton, Englewood, and Oberlin
Fluoride: Liebenthal
Nitrate: Everest, Haviland, Norwich, Palmer, Pretty Prairie, and Robinson
Uranium: Oberlin, Timken, and Towns River
TTHMs&HAA5s: Elk City, Grenola, Longton, Moline, and Severy
TTHMs: Mitchell County RWD #2
HAA5s: Linn Valley and Richmond

4) Discrepancies exist between the 2010 Kansas Annual Compliance Report submitted by KDHE and the 2010 SDWIS-FED ACR. The discrepancies were:

numbers of MCL DBP violations,
numbers of and systems with:
single and monthly turbidity treatment technique violations,

Lead and Copper Rule Routine and Follow-up monitoring violations, and public notice rule violations.

These corrective action letter needs to propose a schedule for addressing these discrepancies.

5) Repeat samples for routine total coliform positive samples determined by the KDHE Lab are collected by the system within 24 hours of being notified of a total coliform positive routine sample. However, the actual time for collection of a repeat sample averages one to two weeks, and is not representative of the routine sample that tested positive. Consideration should be given to providing systems with extra sample bottles to collect a sample within 24 hours of the KDHE Lab knows of a total coliform positive routine sample. The corrective actions letter needs to address this consideration.

6) Monthly turbidity reports from surface water systems received at the Central Office by mail or fax need to be physically date stamped on the date received to document the date received entered into SDWIS. The corrective actions letter needs to propose a date for the development and implementation of a Standard Operating Procedure (SOP) for documenting receipt of compliance forms by the Central Office.

7) Monthly turbidity reports need to be revised to include individual filter effluent follow-up and reporting requirements. The corrective actions letter needs to propose a date for the development and implementation of a Standard Operating Procedure (SOP) that addresses individual filter effluent follow-up and reporting requirements in the monthly turbidity report.

8) The reporting levels for four Synthetic Organic Chemicals (SOCs) are above the required Federal Detection Limits required in 40 CFR 141.24(h). Contaminants detected above the Federal DLs are to go to increased monitoring until it can be shown that it is reliably and consistently below the MCL. The KHDE Lab has shown to the Region 7 Drinking Water Lab Certification Team that it can attain a method detection limit less than the Federal DL, except for endrin. A statement needs to be added to the Phase II/V waiver plan for the 3rd compliance cycle concerning historical data for endrin showing that is reliably and consistently below the MCL. The Reporting Levels for the other SOCs need to be changed to the Federal DL, or a statement in writing needs to be attained from the KDHE Lab that the drinking water program will be notified if any of the three SOCs are detected above the Federal DL but below the reporting level. The corrective action letter needs to address the change to the Phase II/V waiver plan for endrin and the change to the reporting level for the other three SOCs.

9) Sanitary surveys are conducted by individuals in the Bureau of Environmental Field Services. Significant deficiencies are tracked in a database. The corrective actions letter need to propose a date for the development and implementation of an SOP for tracking when proposed corrective actions to significant deficiencies identified in sanitary surveys are addressed in a timely manner.

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10) The operator certification program is managed by individuals in the Technical Services

[redacted]

[redacted]

A) Historical PWSS Program Grant and DWSRF Set-asides

Table 1 shows the allotments for the PWSS Program in Kansas.

Table 1. Kansas PWSS Program Allotments

FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10
$995,700	$1,121,400	$1,094,000	$1,075,100	$1,073,900	$1,087,400	$1,084,000	$1,156,000

This grant helps KDHE develop and implement a PWSS program to enforce the requirements of the Safe Drinking Water Act and ensure that water systems comply with the National Primary Drinking Water Regulations. Key activities carried out under a PWSS program include:

- developing and maintaining state drinking water regulations;
- developing and maintaining an inventory of public water systems throughout the state;
- developing and maintaining a database to hold compliance information on public water systems;
- conducting sanitary surveys of public water systems;
- reviewing public water system plans and specifications;
- providing technical assistance to managers and operators of public water systems;
- carrying out a program to ensure that the public water systems regularly inform their consumers about the quality of the water that they are providing;
- certifying laboratories that can perform the analysis of drinking water that will be used to determine compliance with the regulations; and
- carrying out an enforcement program to ensure that the public water systems comply with all of the state's requirements.

KDHE also the been using the set-asides in the Drinking Water State Revolving Fund. Since 1997, KDHE has spent $10,961,630 of the $13,7655,310 made available. This money is used for mainly for the capacity development program and the contract with the Kansas Rural Water Association (KRWA) to provide technical assistance to small systems. Recently the set-asides have been used to re-imburse LT2 crypto monitoring conducted by systems serving less than 10,000.

B) Primacy – Past and Present

KDHE proposed a comprehensive package of new regulations which (with a few minor exceptions) adopt the National Primary Drinking Water Regulations by reference in May 2004. Most of the national rules which the Environmental Protection Agency has promulgated pursuant to the federal Safe Drinking Water Act (SDWA) will become the regulations for Kansas public water supplies. With the exception of bacteriological monitoring for small water systems, the proposed new regulations are no more stringent than is absolutely necessary to meet the federal requirements for administering the Safe Drinking Water Act.

KDHE has frequently adopted revised drinking water regulations (K.A.R. 28-15-1 through K.A.R. 28-15-37) to comply with the SDWA and its various amendments as re-authorized by Congress since 1974 (the most significant federal amendments being added in 1996). Since the last administrative adoption of state rules and regulations, EPA has promulgated nine new major drinking water rules, and is preparing to promulgate at least four more additional rules in the near future.

The nine new drinking water rules adopted by reference in May 2004 are the Arsenic Rule, the Consumer Confidence Rule, the Filter Backwash Recycling Rule, the Interim Enhanced Surface Water Treatment Rule, the Lead and Copper Rule Minor Rule Revisions, the Long Term 1 Enhanced Surface Water Treatment Rule, the Revisions to the Public Notification Rule, the Radionuclides Rule, and the Stage 1 Disinfectants and Disinfection By-Products Rule.

More information on the KDHE adopting-by-reference policy can be ascertained from the Executive Summary: http://www.kdheks.gov/pws/regs/A.pdf .

The four new rules to be adopted in the future are the Ground Water Rule, the Long Term 2 Enhanced Surface Water Treatment Rule, the Short Term Revisions to the Lead and Copper Rule, and the Stage 2 Disinfectants/Disinfection Byproducts Rule.

The request for an extension to April 2010 to adopt these rules was provided to KDHE in September 2009. Due to the "bundling" of these rules, EPA Region 7 granted until October 10, 2011, for KDHE to submit complete and final primacy program revisions for these drinking water rules.

A commitment in the 2011 KDHE PWSS Program Work Plan was to submit a request for approval of primacy revisions to adopt these 4 rules in the First Quarter Fiscal Year 2011.

Draft crosswalks to adopt the four new rules by reference were submitted to the EPA Region 7 by e-mail in April 2010. Approval with minor comments was provided in May 2010.

Appendix A is the Timeline for Permanent Rules and Regulations in the State of Kansas. The step where these four rules are in this timeline needs to be identified so a date for the request for approval of the primacy revision package will be submitted to EPA Region 7 can be proposed.

KDHE is currently implementing these 4 rules. When necessary, KDHE will refer enforcement actions to EPA Region 7 until the rules are published in the Kansas Register.

Region 7 conducted early implementation of the Stage 2 DBP Rule and the LT2 rule. Standard Monitoring Plans were prepared by the systems and approved by EPA Region 7. During the training the systems were instructed to arrange a contract with a KDHE-approved lab to analyze the standard monitoring samples because the KDHE Lab did not have the capacity to analyze the standard monitoring samples. Some systems neglected to contract with a lab, and therefore, did not have the data to prepare an IDSE Report. Appendix B lists the systems that were referred to EPA for not submitting an IDSE Report required by the Stage 2 DBP Rule. The due date for submission of an IDSE Report is January 1, 2012. The systems appear on the way towards that end.

C) Performance Measures

The overall objective of the drinking water program is to protect public health by ensuring that public water systems deliver safe drinking water to their customers. EPA measures the compliance of drinking water standards in three ways: by population, by community water systems, and by "person months."

SDW-211 – Population served by CWSs – percent of the population served by community water systems that receive drinking water that meets all applicable health-based drinking water standards through approaches including effective treatment and source water protection. Target – 90%

SDW – SP1.N11 – CWSs meeting safe standards - Percent of community water systems that meet all applicable health-based standards through approaches that include effective treatment and source water protection. Target – 90%

SDW – SP2 – "Person Months" w/ CWSs safe standards - Percent of "person months" (i.e. all persons served by community water systems times 12 months)

during which community water systems provide drinking water that meets all applicable health-based drinking water standards. Target – 95%

Table 2 shows the Performance Measures by Community Water Systems in Kansas for each quarter during 2**010.**

Table 2 – 2010 Performance Measures

Quarter	1	2	3	4
Number of Health-Based Violations	311	297	287	260
Systems with Health-Based Violations	105	112	113	111
Population with Health-Based Violations	164,009	562,920	631,816	602,720
Total Systems	894	891	890	899
Total Population	2,575,112	2,577,180	2,639,318	2,639,251
GPRA Population (Subobjective 2.1.1)	93.6%	78.2%	76.1%	77.2%
GPRA System (SP1)	88.3%	87.4%	87.3%	87.7%
Person-Month Systems (SP2)	93.7%	93.9%	93.8%	93.9%
Person-Month Population	97.8%	96.4%	96.1%	95.6%

Commented [R714]: Too much info in the table. Simply to show comparison to GPRA criteria. Did they meet GPRA goals? We should clearly state so. Is quarterly breakout of info helpful? Is GPRA target cum or by quarter? Need cum data?

D) Staffing – Central and District Office

The Division of Environment of the Kansas Department of Health and Environment has five Bureaus and the Kansas Health & Environmental Labs (Appendix C). The Public Water Supply is one of eight sections in the Bureau of Water (Appendix D). The Public Water Supply has four units: compliance and data management, engineering, capacity development, and State Drinking Water Revolving Loan Fund (Appendix E). Two employees in the Technical Services Section of the Bureau of Water manage the Water and Wastewater Operator Certification Program. Fourteen employees in the Technical Services Section of the Bureau of Environmental Field Services provide water program regulatory services (conduct sanitary surveys) and compliance assistance, and respond to citizen concerns regarding water.

The FY09 and FY10 PWSS Program Work Plan Report identified 17.2 FTEs.

The Public Water Supply Section has 4 vacancies: Section Chief, Enforcement and Regulation Development Supervisor, Engineering Plan Review, and Monitoring and Compliance. An Interim Section Chief was appointed by the Division of Environment Director on September 19, 2011. The Enforcement and Regulation Development Supervisor position has been vacant since February 2011. An Interim Enforcement and Regulation Development Supervisor needs to be appointed by the end of this calendar year.

E) KDHE Annual Compliance Report – State and Federal Inventory and Violations

The Draft State of Kansas Public Water Supply Annual Compliance Report for Calendar Year 2010 (2010 Kansas ACR) was received on July 29, 2011. It was due on July 1, 2011.

1) Inventory. Table 3 is the PWS inventory that is contained in the 2010 Kansas ACR:

Table 3 – 2010 Kansas ACR PWS Inventory

Type of Water System	Ground Water	Surface Water	Ground Water/Surface Water	Total	Population
Community Water Systems (CWSs)	526	308	62	896	2,632.410
Non-Transient Non-Community Water Systems (NTNCs)	45	2	0	47	19,641
Transient Non-Community Water Systems (TNCs)	88	4	0	92	4,185
Total	659	314	62	1,035	2,656,236

Future ACRs should provide numbers for the 6 types of PWSs based on source water categories: surface water(SW), surface water purchasing(SWP), ground water under the influence (GU), ground water under the influence purchasing (GUP), ground water (GW), and ground water purchasing (GWP).

Table 4 shows the number of CWSs in each category using the GPRA MS Excel Pivot Table(http://water.epa.gov/scitech/datait/databases/drink/sdwisfed/pivottables.cfm).

Table 4 – 2010 Kansas CWS Inventory by Source Water Categories

Category	SW	SWP	GU	GUP	GW	GWP	Total
Number	76	285	5	7	446	79	898
Population	1,391,089	366,496	140,117	15,596	689,787	36,251	2,639,336
Total	361		12		525		898
Total	1,757,585		155,713		726,038		2,639,336

This will provide a more descriptive indication of the number of systems that have specific rule compliance requirements. For example, 76 CWSs have monthly turbidity reporting requirements, not 308.

The populations of drinking water systems are updated every year using information from the Secretary of State's Office. If a system requests a change in population served, KDHE requires a certification from the system before any change is made in the Safe Drinking Water Information System (SDWIS). Also, KDHE has other tools to update the number of connections and administrative contacts, etc. KDHE is maintaining and updating the inventory as required.

2) Violations. Appendix F shows the number of violations reported in the 2010 Kansas ACR and the SDWIS Fed ACR. The 2010 Kansas ACR did not provide numbers of systems that returned to compliance, as shown by NP in Table 5. This should be included in future ACRs.

The numbers were not close for:

Commented [R715]: A detailed table would be helpful here. Info discussed in subsequent section (sect G) should be rolled in to table.

a) numbers of DBP MCL violations; however, the number of systems with DBP MCL violations did match,

b) numbers and systems with single and monthly turbidity treatment technique violations,

c) numbers and systems with Lead and Copper Rule Routine and Follow-up monitoring violations, and

d) numbers and systems with public notice rule violations.

These differences between the numbers need to be investigated and corrected, where necessary.

F) Data Management

KDHE is using SDWIS/State version 2.3. The KDHE Lab reports compliance data directly into SDWIS/State. Compliance data generated by other drinking water labs certified by KDHE or from public water supplies are mailed, faxed, or e-mailed to the Central Office in Topeka. These compliance data are scanned into WebNow and entered into SDWIS/State. KDHE is working to develop a policy requiring electronic transfer of data into SDWIS/State from all private labs.

The Drinking Water Watch(DWW) went on-line on for the public to view compliance data stored for each drinking water system: http://165.201.142.59:8080/DWW/.

G) Drinking Water Rule Implementation

The Public Water Supply (PWS) Section has a website: http://www.kdheks.gov/pws.

Appendix G is a copy of the information available on the KDHE PWS website.

Available on the PWS website are Survival Guides, developed for the Total Coliform Rule, the Interim Enhanced Surface Water Treatment Rule, the Long Term 1 Enhanced Surface Water Treatment Rule, the Filter Backwash Recycling Rule, the Phase II/V Chemical Contaminant Monitoring Rule, the Stage 1 Disinfectants/Disinfection Byproducts Rule, the Public Notification Rule, and the Consumer Confidence Report

Rule. These guides provide monitoring and compliance information, and reports for recording and reporting compliance data to KDHE.

Survival Guides for the four new rules should be developed for placement onto the website to coincide the submittal of the request for approval of primacy revision.

KDHE provides training on the rules every year at the Kansas Rural Water Association Annual Conference in April and the University of Kansas Water and Water Operators Annual School in August.

The Monitoring and Compliance Group of the Compliance and Data Management Unit of the Public Water Supply Section prepares lists of systems that need compliance samples for each rule and shares these lists with the Kansas Department of Health and Environment Laboratory (KHEL).

The KHEL is certified to conduct drinking water analysis by EPA Region 7. The most recent on-site evaluation for chemistry was in November 2009; for microbiology was in April 2009, and for radiochemistry was in September 2009. The KHEL maintains these certifications until 2012.

The Drinking Water Watch was used to check for the existence of compliance data received in 2010. If the compliance data was not conducted in 2010 because of the approved waiver plan discussed in Section G. 4 below, the existence of data consistent with the waiver plan was checked.

Two or three of each of the 6 categories of public water systems were randomly selected in each of the 6 Bureau of Environmental Field Services Districts. Appendix H is the listing of systems that were checked for existence of compliance data.

The existence of compliance data was found in the Drinking Water Watch for all rules for all the randomly selected systems.

1) Total Coliform Rule (TCR)

Jean Herrold is the Total Coliform Rule Compliance Officer.

KDHE adopts by reference the Total Coliform Rule [40 CFR 141.21], with the following changes:

a(2) - The sampling period microbiological compliance shall be one calendar month for all PWSs, and

a(3) – Number of required samples

(i) Each PWS that uses surface water as its source of supply and serves a population of 4,100 or less shall take a minimum of 4 water samples per compliance period.

(ii) Each PWS that uses groundwater as its source of supply that serves at population of 2,500 or less and each PWS that serves at population of 2,500 or less that purchases water from another PWS shall take a minimum of 2 water samples per compliance period. PWSs serving more than 2,500 shall collect the number of samples per compliance period as described in 141.21(a)2.

Table 5 lists the number samples collected for compliance with the Total Coliform Rule by the KHEL Microbiology Lab.

Table 5 – Total Coliform Rule Samples in 2010

Quarter Collected	Total Coliform Negative	Total Coliform Positive	E coli Positive	Invalid Samples	Quarterly Totals
First	8,264	28	0	197	8,489
Second	8,515	109	10	125	8,759
Third	8,897	180	7	148	9,232
Fourth	8,701	92	0	189	8,982
Total	34,377	409	17	659	35,462

These data are reported electronically to SDWIS by the KDHE Lab. The reason for the invalidation of a sample is recorded into SDWIS by the KDHE Lab.

Approximately 11,000 samples are generated by other drinking water commercial or municipal labs certified for microbiology by the KDHE. Some are reported electronically and some are entered manually into SDWIS.

A non-acute MCL violation occurs when more than one sample per month, or more than 5% of samples that collect over 40 samples per month, i.e., serves more than 33,000, are total coliform positive. The 2010 ACR had 55 systems with 63 monthly non-acute MCL violations; this agrees with Federal SDWIS.

A repeat sample is required for collection on all Total Coliform Positive routine samples. These are to be collected within 24 hours of being notified of the positive result. The collection of a repeat sample is typically 24 hours for systems with their own certified lab. The collection of a repeat sample for systems using the KDHE Lab is typically one week, and sometime two weeks. This is due to the KDHE Lab notifying the system of a total coliform positive when the repeat sample container is received by mail. KDHE should consider sending out extra sample containers so systems may collect a sample within 24 hours that the KDHE Lab is aware of a Total Coliform Positive sample.

An acute MCL violation occurs when a repeat sample is either total coliform or E. coli positive. The 2010 ACR had three acute MCL violations from 3 systems; this agrees with Federal SDWIS.

The ACR reports states that an acute MCL violation occurs with any combination of E coli positive in the initial (routine) and repeat sample. This should be corrected according to the definition in the previous paragraph.

The KDHE Lab was visited by the Region 7 Lab Assessment Team in April 2009. The Region 7 Lab Assessment Team recommended the Region 7 Certification Authority extend the KDHE Lab drinking water lab certification for microbiology. The microbiology certification was extended until April 20, 2012.

Some Post Offices are being closed which could impact the delivery of samples within the required 30 hour holding time.

2) Interim Enhanced/Long Term 1 Enhanced Surface Water Treatment Rule (LT1)

Dianne Sands is the Surface Water Treatment Rules Compliance Officer.

Surface water treatment rules require at least 3-log removal and/or inactivation of *Giardia lamblia* cysts and at least 4-log removal and/or inactivation of viruses before the first customer. According to 40 CFR Part 141.70(b), a public water system using a surface water source or a ground water source under the direct influence of surface water is considered to be in compliance with these requirements if it meets the filtration requirements of 40 CFR 141.73 and the disinfection requirements in 40 CFR 141.72(b).

Filtration performance is assessed using the treatment technique, turbidity. Turbidity triggers were lowered via Subpart P for systems serving at least 10,000 in 1998. These triggers became applicable for systems serving less than 10,000 via Subpart T in 2002.

Survival Guides for Interim and Long Term 1 Enhanced Surface Water Treatment Rules, dated 2009, are found on the PWS section website:

http://www.kdheks.gov/pws/survival.html

Appendix C of each survival guide contains a "Monthly Turbidity – Disinfection – CT" form with associated directions for the system to complete, sign, date, and return the form no later than the 10th day following the end of each month.

The form and notes for completing the form were modified in November 2010. The modified form is in Appendix C. The survival guides should be modified to include these new forms with required and suggested modifications described below.

The form provides spaces for reporting daily:

A) Minimum Residual in the Distribution System,

B) Minimum Residual Leaving the Plant,
C) Maximum Combined Filter Effluent (CFE) Turbidity Reading For Each Day,
D) Total Number of CFE Turbidity Readings Taken Each Day,
E) Number of CFE Turbidity Readings Greater than 0.3 NTU,
F) Disinfectant Contact Ratio, and
G) Bacteriological Sample Collection.

Three columns in A and B are provided to report Minimum Daily Residual, Disinfectant Type (Combined or Free), and Number of Residual Readings Taken. The lowest minimum daily residual recorded in the month is to be entered at the bottom of the first column. The total number of residual readings taken in the month is to be entered at the bottom of the third column.

The instructions should include the minimum frequency for recording residual disinfectant leaving the plant (6, or once every four hours of operation [40 CFR 141.72(b)2]) and in the distribution system (at least daily (KDHE rule), including the measurement with every total coliform rule sample collected). Footnotes on the minimum frequencies should be added to A and B on the form.

Free and total chlorine residuals may be measured continuously by adapting a specified chlorine residual method for use with a continuous monitoring instrument provided the chemistry, accuracy, and precision remain the same. Instruments used for continuous monitoring must be calibrated with a grab sample measurement at least every five days, or with a protocol approved by the State. This should be evaluated during the sanitary survey.

The instructions include the minimum frequency for recording daily combined filter effluents (CFE) (at least every four hours of operation, or daily for plants serving less than 500 [40 CFR 141.74(c)]) reported in D. A footnote on the minimum frequency should be added to D on the form.

Column E is to identify the number of CFE readings that exceed the trigger of 0.3 NTU established for conventional and direct filtration treatment. The form includes a parenthesis, "(>= 0.35)". The parenthesis in the instructions number 6, "0.5 for systems < 10,000 until January 14, 2005)", should be deleted, and replaced with an explanation of the "(>= 0.35)" in Column E of the form.

The trigger needs to be included for the slow sand and alternative filtration treatments.

The notes to the form provides a formula for calculating Percent of NTU Readings which are in Compliance. The formula needs to corrected, as follows:

$$\frac{\text{Total (Sum of Readings in D)} - \text{Total (Sum of Exceedances in C)}}{\text{Total (Sum of Readings in D)}}$$

Step 4 in the instructions directs the system to notify KDHE with 24 hours if the highest reading exceeds 5.0 NTU. This needs to be corrected that systems are to contact KDHE if any turbidity reading exceeds 1.0 NTU. The value established for slow sand or alternative filtration needs to be identified.

Column F is to identify Disinfectant Contact Time (CT) Ratio used in disinfection profiling. This was to have begun between April 1, 200 and January 1, 2004, and last for 12 months. Disinfection profiling is to be conducted with changes to disinfection point, disinfectant type, and/or other changes to the disinfection process. Column F should be removed from the form.

The instructions should include direction for completing the "Bact Samples Collected" column.

The form contains 3 boxes at the bottom of the form to be completed by the system:

Please check box if disinfectant residual leaving the plant was < 2.0 mg/L free chlorine or combined (attach required data with this report)
Please check box if the Individual Filter Effluent (IFE) was monitored and recorded every 15 mintues as required
Please check box if any IFE exceeded 1.0 NTU in two consecutive readings taken 15 minutes apart (attached required data with this report)

The instructions needs to include the required data needed if the first and third box are checked.

The form needs to be modified and instructions developed for the following individual filter effluent follow-up and reporting requirements:

a) Systems serving at least 10,000:
   2 consecutive recordings greater than 0.5 NTU taken 15 minutes apart at the end of first 4 hours of continuous filter operation after backwash/offline

b) All systems
   a. 2 consecutive recordings greater than 1.0 NTU taken 15 minutes apart at the same filter for 3 months in a row
   b. 2 consecutive recordings greater than 2.0 NTU taken 15 minutes apart at the same filter for 2 months in a row

KDHE has a survival guide for systems serving more than 10,000 and for systems serving less than 10,000. Appendix C should have different forms for the different requirements.

The instructions state that completed "Monthly Turbidity – Disinfection – CT" forms are to be returned no later than the 10th day following the end of the month. This should be replaced with "Reports are due by the 10th day of the following month".

The form states the form is to be mailed to the Public Water Section in Topeka. The form should also include a fax number. The form should also include a statement that "Reports are due by the 10th day of the following month".

An electronic version of the form should be developed for use by systems to submit via e-mail.

Forms are being received at the Central Office by e-mail, letter, or fax. However, the date the forms are received by the Central Office are not being documented for every form, particularly those received by letter or fax. Forms received by e-mail are e-mailed to WebOne. The date of this e-mail is entered into SDWIS. Forms received by letter or fax need to date-stamped. This date stamp should be entered into SDWIS. Table 6 shows the number of forms received in 2010 that were not date-stamped.

Table 6 – Monthly Turbidity Forms Date-Stamped.

System Name	Monthly forms Received in 2010	Monthly Forms Date-stamped in 2010
Miami County RWD #2	12	8
Independence	12	12
Olathe	12	7

A window needs to be established for when a report is deemed to be late for reporting by the 10th day of each subsequent month, and will be assessed a SDWIS violation code of 38 0300.

The 2010 ACR 33 treatment technique violations from 11 systems. The Federal SDWIS has 2 treatment technique violations from 2 systems.

3) Stage 1 Disinfectants and Disinfection Byproducts Rule (Stage 1 DBP)

Andrew Hare is the Disinfectants/Disinfection By-Products Rule Compliance Officer.

Kansas Drinking Water Regulation 28-15-19 requires all drinking water supplied to the public from a public water supply system shall be disinfected. When chlorination is employed, a sufficient amount of chlorine shall be added to the water to maintain a

distribution system chlorine residual of at least 0.2 mg/L of free chlorine or 1.0 mg/L of combined chlorine.

The Stage 1 DBP applies to all CWSs and NTNCWSs that add a chemical disinfectant to its finished water, and to those systems buying from such systems that boost the chemical disinfectant supplied to its customers.

Table 7 lists the monitoring schedule for the systems that have Stage 1 DBP Rule compliance monitoring requirements.

Table 7 – Stage 1 DBP Rule Systems

Frequency	SW	SWP	GU	GUP	GW	GWP	Total
Triennial	1	21		4	443	6	475
Annual	1	14	2	1	27	1	46
Quarterly	82	23	2	0	8	0	115

The Maximum Contaminant Level (MCL) for Total Trihalomethanes is 0.080 mg/L. The MCL for Haloacetic Acids (HAA5s) is 0.060 mg/L.

Forms for reporting compliance with the MCLs for TTHMs and HAA5s are contained in the Survival Guide to the Stage 1 Disinfectants and Disinfection By-Products Rule.

The Kansas 2010 ACR had 14 systems with 41 HAA5s MCL violations and 15 systems with 43 TTHMs MCL violations; 8 of these systems are on quarterly monitoring and exceed the MCL every quarter: TTHMs&HAA5s-Elk City, Grenola, Longton, Moline, and Severy; TTHMs – Mitchel County RWD #2; and HAA5s – Linn Valley and Richmond. The Federal SDWIS has 20 systems with 63 HAA5s and/or TTHMs MCL violations.

Forms for reporting compliance with the Total Organic Carbon (TOC) removal percentages are contained in the Survival Guide to the Stage 1 Disinfectants and Disinfection By-Products Rule.

All but 4 of the 75 surface water systems use conventional treatment, and therefore, have TOC removal percentage requirements. Kansas had 4 systems with 12 Total Organic Carbon (TOC) Treatment Technique Violations. The Federal SDWIS has 4 systems with 8 violations.

The "DAILY CHLORINE RESIDUAL LOG SHEET" is contained in the Survival Guide to the Total Coliform Rule. KDHE determines compliance with chlorine and chloramines maximum disinfectant residuals (MRDLs) for systems that do not have Stage 1 DBP compliance monitoring requirements.

Compliance forms to report quarterly and running annual averages for compliance with the chlorine, chloramine, and chlorine dioxide MRDLs by systems with Stage 1

DBP compliance monitoring requirements are contained in the Survival Guide to the Stage 1 Disinfectants and Disinfection By-Products Rule. One of the forms is for chlorine or chloramines. Another form is for chlorine dioxide; this form also provides space to report compliance with the chlorite MCL.

There are 19 systems in Kansas that use chlorine dioxide .

There are 8 systems in Kansas that use ozone. There does not appear to be a form in the Stage 1 DBP Survival Guide for reporting compliance with the bromate MCL.

4) Phase II/V Chemical Monitoring Rule

Dianne Sands is the Phase II/V Chemical Monitoring Rule Compliance Officer.

A Phase II/V Waiver and Monitoring Plan was prepared and submitted for the second compliance cycle, 2002 – 2010. It was approved by e-mail on April 1, 2004. See Appendix I.

A Draft Phase II/V Waiver and Monitoring Plan for the third compliance cycle, 2011-2019, was submitted on August 15, 2011.

a) Inorganic Compounds (IOCs)

1) Nitrates

Every system has routine monitoring for nitrate. The MCL for nitrate is 10 mg/L. Mandatory disinfection per 28-15-19 allows for a monitoring waiver for nitrite; this waiver is documented in the Phase II/V Monitoring Waiver Plan.

Ground Water systems have routine monitoring of once per year. Except for TNCs, repeat monitoring is increased to quarterly whose routine monitoring yields results are at least ½ the MCL, i.,e. 5 mg/L. The trigger for increased monitoring has been increased to 10 mg/L because historical data has shown that systems have been reliably and consistently below the MCL.

Surface Water systems have quarterly routine monitoring of once a quarter. Routine monitoring may be reduced to once after four consecutive quarterly samples are reliably and consistently below the MCL. Suface water systems not exceeding the MCL for nitrate are on annual monitoring because historical data has shown that systems are reliably and consistently below the MCL.

Kansas has 27 systems with 62 nitrate MCL violations; this agrees with Federal SDWIS. Six of these systems exceed the MCL every quarter: Everest, Haviland, Norwich, Palmer, Pretty Prairie, and Robinson.

2) Arsenic

The 2010 ACR had 26 MCL violations from 7 systems; this agrees with Federal SDWIS. Six of these systems exceed the MCL every quarter: Argonia, Atwood, Buhler, Clayton, Englewood, and Oberlin.

3) Fluoride

The 2010 ACR had 4 MCL violations from 1 system: Liebenthal.

B) Volatile Organic Compounds (VOCs)

The 2010 ACR has 1 system with VOC M&R violations; Federal SDWIS has 2 systems with 2 VOC M&R violations. Similarly, Federal SDIWS has 42 individual VOC M&R violations from 2 systesm; the 2010 ACR has none of these individual VOC violations.

C) Synthetic Organic Compounds (SOCs)

Most of the reporting levels from the KHEL for the SOCs are at the Federal Detection Level (DL) required by 141.24(h), except for the four SOCs listed in Table 9. The EPA Region 7 Drinking Water Lab Assessment Team during the on-site evaluation for chemistry in November 2009 determined that KHEL was able to attain a method detection limit less than the Federal DL for these four SOCs, with the exception of endrin; the attainable MDL is also included in Table 9. The reporting limit for these four SOCs should be changed to the Federal DL, or the Public Water Supply Section should obtain in writing that it will notified by the KHEL if a contaminant is detected above the Federal DL and the below the Reporting level for the contaminants in Table 8. The waiver plan should also include that historical data in the monitoring for endrin has shown it is reliably and consistently below the MCL.

Table 8 – SOCs with Reporting Levels greater than Federal DLs

SOCs	MCL (ug/L)	Reporting Level (ug/L)	Federal DL (ug/L)	Attainable Method DL (ug/L)
Endrin	2	.2	.01	.04
Hexachlorocyclopentadiene	50	5	.1	.001
Methoxychlor	40	4	.1	.1
Simazine	4	.4	.07	

Attaining the Federal DL is not a condition for drinking water certification. However, the waiver plan should also include that historical data for endrin compliance monitoring has shown that systems are reliably and consistently below the MCL.

The DWW lists carbofuran as a contaminant analyzed by EPA Method 507 with a reporting level of .5 ug/L for some systems; Olathe is one such system. EPA Method 507 is not an approved method for carbofuran. An approved method for carbofuran is EPA Method 531.1. The DWW should be corrected to indicate an approved method for carbofuran.

Federal SDWIS has 2 atrazine M&R violations from 2 systems and 2 ethylene dibromide M&R violations from 2 systems; the 2010 ACR had no chemical M&R violations.

5) Radionuclides

Dianne Sands is the Radionuclide Rule Compliance Officer.

The 2010 ACR had 17 uranium MCL violations from 6 systems; Federal SDWIS has 16 uranium MCL violations from 7 systems. Three of these systems exceed the MCL every quarter: Oberlin, Timken, and Towns River.

The 2010 ACR had 3 systems with 5 combined radium MCL violations; this agrees with Federal SDWIS. None of the systems exceed the MCL every quarter.

6) Lead and Copper Rule

Andrew Hare is the Lead and Copper Rule Compliance Officer.

KDHE allows systems that are to collect 5 compliance samples to collect 6 samples, and use the 5th ranked sample as the 90th percentile value. This is an allowable implementation of the rule.

However, during its training on the lead and copper rule, the KDHE presenter is saying that the 6 sample is "thrown out". It is strongly encouraged that the presentation be modified to represent the presentation in the previous paragraph, i.e., the 5th ranked sample is used as the 90the percentile value

The 2010 ACR had 31 routine or follow-up monitoring or reporting violations from 29 systems; the Federal SDWIS has 71 routine or follow-up monitoring or reporting violations from 59 systems.

7) Consumer Confidence Report Rule (CCR)

Patti Croy is the Consumer Confidence Report Rule Compliance Officer.

The 2010 ACR had 32 failure to report CCRs from 32 systems; Federal SDWIS has 33 failure to report CCRs from 32 systems.

8) Public Notification Rule

The 2010 ACR lists 33 systems with at least one public notification violation. The Federal SDWIS lists 159 violations from 95 systems.

H) Engineering and Existing System Modification

Approximately 300 construction and study documents were submitted to the Engineering Unit for review and approval in 2010. The review and approval of these documents are managed with a SWEPT database.

The SWEPT database tracks studies received from systems exceeding the MCL are identified. Procedures for sharing this information in monthly Enforcement Meetings has recently been initiated. This practice will ensure that the Public Water Supply Section can track that systems exceeding the MCL are on the path to return to compliance.

[redacted]

Procedures for sharing lists of systems with current enforcement actions with the Engineering Unit should be developed and implemented by the Program Development and Enforcement Group.

I) Sanitary Surveys

Sanitary surveys are conducted by the 14 individuals in the water supply and wastewater unit of the six Bureau of Environmental Field Services six Districts. Only one of the 344 sanitary surveys due in 2010 were not performed.

The KDHE tracks the frequency of sanitary surveys using SDWIS. The KDHE uses the dates of the previous sanitary surveys to generate a list of systems that need a sanitary survey. The list is sent to the field offices so they can coordinate the site visits.

Only one of the 344 sanitary surveys due in 2010 was not performed.

Sanitary surveys are being conducted electronically with a focus on the 8 required elements. KDHE is tracking significant deficiencies. Seventy-nine significant deficiencies were resolved in 2010; 104 remain unresolved.

[redacted]

The majority of the unresolved significant deficiencies are due to lack of an Emergency Water Supply Plan or cross connection control program. The letter to the system identifying the significant deficiency includes information that free assistance to prepare these documents can be obtained from the Kansas Rural Water Association (KRWA). A contract with the KRWA to provide technical assistance is managed through the technical set-aside of the DrinkingWater State Revolving Fund.

These types of significant deficiencies are often unresolved, and are repeated in subsequent sanitary surveys. KDHE should initiate a program to share with the KRWA a listing of the systems that KDHE is sending letters offering KRWA's assistance. This

will allow KRWA to take the lead in offering assistance to the systems to resolve the significant deficiency.

J) Operator Certification

The annual operator certification report was submitted in . It was due by .

Operator Certification requirements and associated training are advertised on the KDHE website: http://www.kdheks.gov/water/www.html .

The Data Management and Analysis Group of the Compliance and Data Management Unit of the Public Water Supply Section provided a report that listed 2 systems that did not have a certified operator - Rick's Restaurant and Leavenworth County RWD #1.

The Water and Wastewater Operator Certification Program is managed by two individuals in the Technical Services Section of the Bureau of Water. The Operator Certification Program indicated that Rick's Restaurant had a contract operator and that the PWS Section was informed of that fact. It did concur that Leavenworth County RWD #1 did not have a certified operator, and did not so for several years. A draft Directive was prepared in December 2010 to be sent to Leavenworth County RWD #1. It was never finalized and transmitted.

The operator certification program is managed by individuals in the Technical Services Section. SDWIS is maintained by the Public Water Supply Section. Procedures to be used by the Technical Services Section for reporting systems without an adequately classified operator to the Public Water Supply Section to be entered into SDWIS and to initiate potential enforcement action need to be documented in an SOP.

The KDHE Operator Certification database is available on-line:

http://kensas.kdhe.state.ks.us/pls/certop/BOW_ADMINL.Home

The database tracks the certification status for each operator. The record for each operator identifies the "Employer". The record does not track a PWSID. The record identifies the class of the operator and if the operator's status is active or not. Since a PWSID is not contained in the record of the on-line database, it is unclear how KDHE can ascertain that each water system has an adequately certified operator. The Operator Certification Program stated that ensuring that each system has an adequately certified operator is managed "behind the scenes".

A significant change to the program will be that an operator will not be allowed to attain a grade of certificaiotn abvove that which is required of the system to whicdh it is employed. This will reduce the numbers of tests requested each year, and will reduce the numbers of the operators moving to other systems.

L) Capacity Development

The Capacity Development Program advertises its program on its website:

http://www.kdheks.gov/pws/capdev.html

The capacity development program has been focused on the implementation of KanCap or the board member training and is working to start with the implementation of the Rate Check-up/CapFinance programs to assist small systems in revising their rates and to create budgets plans and strategies for their system.

Another aspect of this program is the reimbursement of the cost for compliance monitoring for crypto for systems serving less than 10,000 that were triggered into crypto monitoring because their E coli monitoring exceeded the revised trigger of 200. This was allowed through a set-aside to the Drinking Water State Revolving Fund.

The Report to the Governor was submitted on September 29, 2011. It was due by October 1, 2011.

Redacted non responsive

M) Enforcement

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[redacted]

[redacted]

Effectiveness of Enforcement – Part 1

[redacted]

Some pertinent details regarding these (top 11 ETT-scoring) non-compliant systems are outlined in the table below:

Table x – Summary of High Priority, Non-Compliant PWSs in Kansas

PWS Name	PWS ID	ETT Score (July 2011)	Non-Compliance Driver	Enforcement Action-Date	Current Status
[redacted]					
Pretty Prairie	KS2015501	133	Nitrate MCL	SFJ – 11/07	Non-compliant
[redacted]					

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

- Some systems are stagnant, with little progress towards resolving violations (Pretty Prairie, Conway Springs (regionalization), Sumner Co. 5 (regionalization), Mitchell Co. 3 (regionalization))

[redacted]

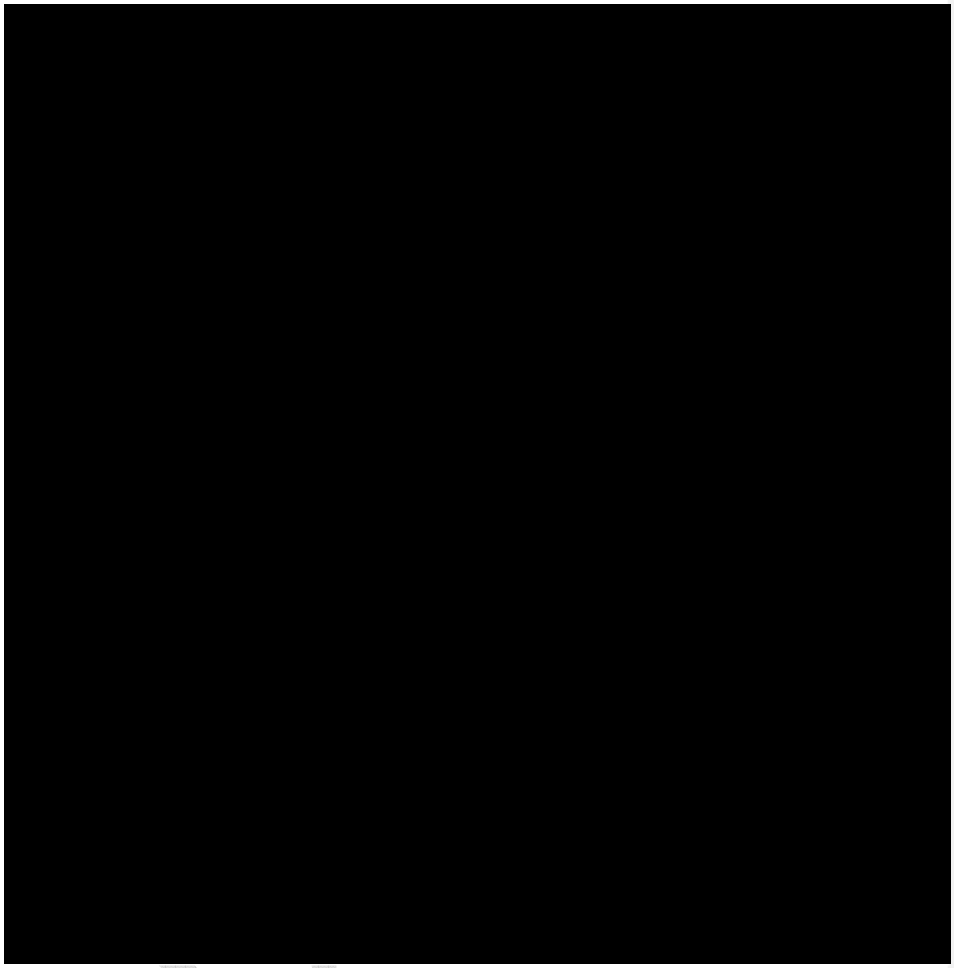
Recommendations - Effectiveness of Enforcement – Part 1

[redacted]

EPA acknowledges long-standing compliance issues with Pretty Prairie, which remains subject to an action based upon KDHE's now defunct "Nitrate Strategy". EPA wishes to work with KDHE to develop a strategy for returning this and similar systems to compliance.

[redacted]

[redacted]					



Recommendations- Effectiveness of Enforcement Part 2

[redacted]

[redacted]

[redacted] As noted previously regarding Pretty Prairie, EPA wishes to work with KDHE to develop a strategy for returning these and similar systems to compliance.

[redacted]

- KDHE should update its enforcement policy to address contaminants other than microbiological contaminants, and implement the updated/revised escalation policy to take timely and appropriate enforcement actions to address significant non-compliers;

- KDHE should review how nitrate concentrations are calculated for comparison with the MCL;

- An escalation policy or other written procedure should be established to address PWSs with a history of recurring nitrate MCL violations;

- A wellhead protection program should be developed to deter nitrate contamination near existing groundwater supply wells;

- Public notices should be monitored more closely to ensure that they comply with applicable regulations for timeliness and content. A written procedure to address such issues should be developed;

- Technical assistance should be provided to water systems with arsenic and radionuclide MCL compliance issues, and timely and appropriate enforcement should be initiated for significant non-compliers.

Notably, the recently concluded APE finds that concerns expressed in the 2007 APE regarding: revisions to the enforcement policy, enforcement to address nitrate violators, and enforcement to address arsenic and radionuclide violators (bullets 1, 3 and 6 above) have not been addressed. The 2007 findings represent fundamental issues with the PWS enforcement process. This heightens the need for appropriate actions to address similar findings noted in 2011.

Appendix A
Timeline for Permanent Rules and Regulations in Kansas

Appendix B
Stage 2 DBP Systems referred to EPA

Schedule 3 Systems

Atchison Co RWD 5C	City of Towanda
Butler Co RWD 1	Franklin Co RWD 4
Butler Co RWD 2	Labette Co RWD 6
Butler Co RWD 3	Leavenworth Co RWD 5
Butler Co RWD 6	Leavenworth Co RWD 8

Butler Co RWD 7	Saline Co RWD 3
City of Salina	

Schedule 4Systems

Allen Co RWD 8	City of Smith Center
Anderson Co RWD 1C	City of St. Paul
Butler Co RWD 4	City of Waverly
City of Alma	Cowley Co RWD 3
City of Burlingame	Greenwood Co RWD 1
City of Florence	Greenwood Co RWD 2
City of Herington	Labette Co RWD 5
City of Howard	Labette Co RWD 8
City of La Cygne	Linn Co RWD 2
City of Leroy	Miami Co RWD 3
City of Marion	Mitchell Co RWD 2
City of Mulberry	Montgomery Co RWD 4
City of Oswego	Neosho Co RWD 2
City of Peabody	Osage Co RWD 3
City of Plainville	Rice Co RWD 1
City of Russell	

Appendix C

Division of Environment

Appendix D

Bureau of Water

Appendix E

Public Water Supply Section

Appendix F – 2010 ACR Violation Comparisons

Code	Name	Source	# viol'ns	# RTC'd	# PWSs
1005	Arsenic MCL	Fed	26	2	7
		KS	26	NP	7
1025	Fluoride MCL	Fed	4	0	1
		KS	4	NP	1
1040	Nitrate MCL	Fed	62	7	27
		KS	62	NP	27
4006	Uranium MCL	Fed	16	4	7

		KS	17	NP	6
4010	Combined Radium	Fed	5	3	3
		KS	5	NP	3
2050	Atrazine MCL	Fed	0	0	0
		KS	1	NP	1
2946	EDB M&R	Fed	2	0	2
		KS	0	0	0
	21 VOCs M&R	Fed	2	0	2
		KS	1	0	1
21	TCR MCL Acute	Fed	3	3	3
		KS	3	NP	3
22	TCR MCL Monthly	Fed	63	51	55
		KS	63	NP	55
23	TCR Routine M&R	Fed	20	13	15
		KS	22*	NP	19*
25	TCR Repeat M&R	Fed	5	4	5
		KS	22*	NP	19*
2	**DBPs MCL Average**	Fed	**63**	8	20**
	TTHMs MCL Average	KS	**41**	NP	14
	HAA5s MCL Average	KS	**43**	NP	15
	DBPs M&R	Fed	**4**	0	3
		KS	**0**	0	**0**
46	TOC Precursor Removal	Fed	8	0	4
		KS	12	NP	4
43	**Single Turbidity**	Fed	**1**	**1**	**1**
		KS	**33***	**NP**	**11***
44	**Monthly Turbidity**	Fed	**1**	**1**	**1**
		KS	**33***	**NP**	**11***
52	**LCR Routine & Follow-up**	Fed	**71**	**4**	**58**
		KS	**31**	**NP**	**29**
58	OCCT Installation & Dem'n	Fed	2	0	2
		KS	3	NP	3
75	**Public Notice**	Fed	**159**	**76**	**95**
		KS	**57**	**NP**	**39**
71	CCR-Failure to Report	Fed	33	25	32
		KS	32	NP	32
NP	Not Provided				
*	Not distinguished				
**	9 systems exceed both				

- Appendix G - KDHE PWS Website
  - http://www.kdheks.gov/pws/

Purpose of the Section
Groundwater Rule NEW
New EPA Rules
- Stage 2 DDBPR Fact Sheet
- LT2 Fact Sheet

PWS Contact Change Form
Primary Drinking Water Regulations

- Kansas Statutes Pertaining to Public Water Supply
- Survival Guides for Drinking Water Rules and Regulations
- Public Water Supply Section Staff
- Kansas Primary Drinking Water Regulation Package
- Drinking Water Contaminants and Maximum Contaminant Levels
- Standards for Secondary Drinking Water Contaminants
- Engineering and Permits Unit
  - Plan Review and Permits
    - Minimum Design Standards
    - Public Water Supply Permit Applications
    - CT Helper
  - State Revolving Loan Fund
- Capacity Development Program
- Data Management & Compliance Unit
  - Total Coliform
  - Arsenic
  - Asbestos
  - Nitrate/Nitrite
  - Inorganic Compounds (IOC)
  - Volatile Organic Compounds (VOC)
  - Synthetic Organic Compounds (SOC)
  - Lead and Copper
  - Disinfection By-Products
    - Stage 1 Compliance Report for populations greater than 10,000 (.xls)
    - Stage 1 Compliance Report for populations less than 10,000 (.xls)
    - Stage 1 Compliance Report with formulas for populations greater than 10,000 (.xls)
    - Stage 1 Compliance Report with formulas for populations less than 10,000 (.xls)
    - TOC Report Forms with formulas (.xls)
    - TOC Reports blank (.xls)
  - Surface Water Treatment
  - Radionuclides
- Sampling Information Guide
- Public Notification
- Consumer Confidence Reports (CCRs)
  - CCR Quick Reference Guide
  - Blank Certificate of Delivery
- Annual Compliance Reports
- Related Links

Appendix H

Randomly Selected Systems in Compliance Data Check

Appendix I

EPA Approval of Phase II/V Waiver Plan

Second Cycle (2002-2010)